

## **Gulfco Workplan Outline**

### **A. Analytical Methods:**

1. Organic Compounds (including volatile, semi-volatile, and pesticide/PCB): CLP Method OLM04.3 or equivalent.
2. Inorganic Compounds: CLP Method ILM05.3 or equivalent.
3. Field based analytical methods that meet Data Quality Objectives (DQOs) for Site.

### **B. Soil Samples: (approx. 200 ft. grid spacing)**

1. 60 @ 0" - 6" for semi-volatiles, pesticides/PCBs, and inorganics.
2. 60 @ 6" - 12" for volatiles.

### **C. Ground Water Samples:**

1. 25

### **D. Surface Water Samples:**

1. Wetlands north of Site: 8
2. Fresh Water Ponds in Lot 55: 4

### **E. Sediment Samples:**

1. Wetlands north of Site: 8
2. Barge slips and Intracoastal Waterway: 10
3. Fresh Water Ponds in Lot 55: 4

### **F. Notes:**

1. Number of samples is based on environmental sampling only. Additional samples will be required for the QA/QC requirements (i.e., field blanks, trip blanks, duplicates, MS/MSD, etc.)
2. Number of samples is for the initial sampling phase. Additional sampling may be required if initial sampling not sufficient to define horizontal and vertical extent of contamination, or to better define "hot spots".
3. Vertical/horizontal extent based on Preliminary Remediation Goals (PRGs):
  - (a) Soil: EPA Region 6 Soil Screening Levels for residential exposure, but no deeper than the water table.
  - (b) Ground Water: MCL (or EPA Region 6 Screening Levels for tap water if no MCL), or Texas Water Quality Standards for Human Health (for salt water fish consumption), which ever is lower.
  - (c) Sediment: TCEQ Marine Ecological Screening Levels, or NOAA Marine Ecological Screening Levels (Low Effects) if no TCEQ screening levels.

### **G. Interim Actions:**

1. Construct a fence, locked gates, and warning signs around Site to prevent access.
2. Remove and properly dispose of hazardous substances in tanks located at the Site.

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3. Decontaminate and/or properly dispose of contaminated tanks located at the Site.
4. Remove contaminated sludge and soil in the area of, and below, the former impoundments that are above the Screening Levels in the EPA Region 6 Soil Screening Levels for the Industrial Outdoor Worker.
  - (a) The maximum excavation depth shall be 25 feet below the ground surface.
  - (b) The excavated soil shall be characterized and properly disposed of.
  - (c) After sampling for verification that cleanup levels have been achieved, or after reaching the maximum excavation depth and sampling to characterize the remaining contamination, the excavated areas shall be backfilled with clean soil, verified by sampling, and graded to previous contours and seeding.
  - (d) Locate and map all off-site water wells, located within one-half mile of the Site boundary.
5. Locate and map off-site water wells within one-half mile of the Site boundary.

### **H. Background:**

1. Discharges occurred from the waste impoundments in July 1974 and August 1979 (EPA inspection report, 7/15/1980). Impoundments closed in 1982.
2. Tank farm area had no containment levees or dikes in 1989; presently contained by concrete berm. Water in concrete berm contained chloroform and 1,2-dichloroethane (LTE Report, 6/1999).
3. Benzene in ground water in impoundment area at 8,180 :g/L (Fish, 1982, wells screened from 38 ft. to 48 ft.).
4. Volatile organic compounds and pesticides detected in two monitoring wells near the former impoundments (Hercules, 12/1989, wells screened 8 ft. to 18 ft.).
5. Chlorinated solvents in ground water in impoundment area up to 32% of solubility, indicating presence of "dense non-aqueous phase liquids" (DNAPL) (TCEQ, 2000, wells screened 10 ft. to 24 ft.).
6. Shallow ground water is salty (32,000 to 50,000 mg/L total dissolved solids), but overlays a drinking water aquifer. Depth to top of aquifer unknown. A former drinking water well (used until 1984), just west of the Site, was screened from 188 ft. to 198 ft, with a 63 ft. water table (E & E, Screening Site Inspection, 1989).
7. Soil sampling documented hazardous substances above background concentrations and above the sample quantitation limits (TCEQ, 2000).
8. One out of two sediment samples from the fresh water pond contained 0.0027 mg/kg toluene. Semi-volatiles and pesticides not analyzed (LTE Report, 6/1999).
9. Sediment sampling documented releases of hazardous substances from the Site to the sediment in the Intracoastal Waterway (TCEQ, 2000).
10. Intracoastal Waterway is considered a fishery (HRS Documentation Record, 2/2002). The local community is concerned about fish and crab consumption.